

(FILE 'HOME' ENTERED AT 17:31:24 ON 21 JUL 2003)

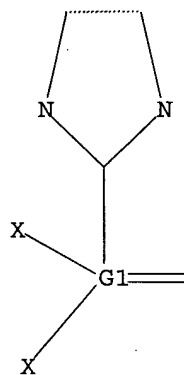
FILE 'REGISTRY' ENTERED AT 17:31:34 ON 21 JUL 2003

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 Os,Ru

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 17:31:56 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 260 TO ITERATE

100.0% PROCESSED 260 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 4233 TO 6167

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 17:32:01 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 5293 TO ITERATE

100.0% PROCESSED 5293 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

=>

=> s nolan, steven P./au
L1 173 NOLAN, STEVEN P./AU

=> s l1 and metal carbenes
1384738 METAL
6933 CARBENES
101 METAL CARBENES
(METAL(W) CARBENES)
L2 0 L1 AND METAL CARBENES

=> s l1 and carbenes
6933 CARBENES
L3 16 L1 AND CARBENES

=> d 1-16 bib abs

L3 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2002 ACS
AN 2002:772677 CAPLUS

TI N-heterocyclic **carbenes** as versatile nucleophilic catalysts for transesterification/acylation reactions

AU Grasa, Gabriela A.; Kissling, Rebecca M.; Nolan, Steven P.

CS Dep. Chem., Univ. New Orleans, New Orleans, LA, 70148, USA

SO Organic Letters (2002), 4(21), 3583-3586

CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society

DT Journal

LA English

AB Imidazol-2-ylidenes, a family of N-heterocyclic **carbenes** (NHC), are efficient catalysts in the transesterification between esters and alcs. Low catalyst loadings of aryl- or alkyl-substituted NHC catalysts mediate the acylation of alcs. with vinyl acetate in convenient reaction times at room temp. Com. available and more difficult to cleave Me esters react with numerous alcs. in the presence of alkyl-substituted NHC to form efficiently the corresponding esters in very short reaction times.

L3 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2002 ACS

AN 2002:618689 CAPLUS

TI N-heterocyclic **carbenes** as highly versatile nucleophilic catalysts for transesterification reaction

AU Grasa, Gabriela A.; Kissling, Rebecca M.; Nolan, Steven P.

CS Department of Chemistry, University of New Orleans, New Orleans, 70148, LA, USA

SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), ORGN-296 Publisher: American Chemical Society, Washington, D. C.

CODEN: 69CZPZ

DT Conference; Meeting Abstract

LA English

AB Nucleophilic N-heterocyclic **carbenes** (NHC) or imidazol-2-ylidenes are very efficient catalysts for transesterification reaction involving various esters and alcs. We found that low loading of aryl- or alkyl-substituted carbene catalysts affect the acylation of various alcs. with vinyl acetate with high conversions. Com. available and more difficult to cleave Me esters were reacted with various alcs. in the presence of alkyl-substituted NHC's to give the corresponding esters in high conversion in very short reaction times. Reaction scope and limitations will be discussed.

L3 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2002 ACS

AN 2002:617566 CAPLUS

TI Synthesis and characterization of a allyl/palladium/N-heterocyclic **carbenes** series

AU Viciu, Mihai S.; Navarro-Fernandez, Oscar; Stevens, Edwin D.; Nolan,

Steven P.

- CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA
- SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), INOR-414 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CZPZ
- DT Conference; Meeting Abstract
- LA English
- AB The synthesis and characterization of a series of new allyl/palladium/N-heterocyclic **carbenes** (allyl)Pd(Cl)NHC (NHC=IMes, IPr, SIMes, SIPr, ItBu) is reported. The activity of air-stable Pd(II) species was investigated in amination of aryl/vinyl halides with various amines at mild or room temps. The activation mechanism of Pd(II) precursors in the presence of base and amine was investigated using NMR techniques.
- L3 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2002 ACS
- AN 2002:617525 CAPLUS
- TI Determination of the Bronsted basicity of N-heterocyclic **carbenes** by solution calorimetry
- AU Kissling, Rebecca M.; Grasa, Gabriela A.; Hillier, Anna C.; **Nolan, Steven P.**
- CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA
- SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), INOR-373 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CZPZ
- DT Conference; Meeting Abstract
- LA English
- AB N-Heterocyclic **carbenes** (NHCs) are rapidly gaining importance as ancillary ligands in organometallic chem. homogeneous catalysis. Calorimetric studies utilizing [Cp*RuCl]₄ have detd. the relative binding strengths of many of the common **carbenes** and other classical late metal ligands and found them to bind more strongly at the metal center than phosphines. These data have necessarily contained a significant steric component and the actual basicity of NHCs has not been addressed. The thermodyn. data gained in soln. calorimetry of protonation of the NHC with HX (X=BF₄⁻, OTf⁻) will consider the basicity, minimizing the steric component. These data will be correlated with NHC.bul.HX-NHC⁺; and org.-base.bul.HX-NHC protonation studies as well ¹H, ¹³C and ³¹P NMR studies. The work presented will place the basicity of **carbenes** in the greater context of org. bases such as phosphines, DBU and Verkade's superbases to aid in their exploitation, not only as ligands on metals, but as org. bases to effect or catalyze org. transformations.
- L3 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2002 ACS
- AN 2002:617110 CAPLUS
- TI N-Heterocyclic **carbenes** in homogeneous catalysis
- AU **Nolan, Steven P.**; Grasa, Gabriela A.; Viciu, Mihai S.; Kissling, Rebecca M.
- CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA
- SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), IEC-123 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CZPZ
- DT Conference; Meeting Abstract
- LA English
- AB The use of N-heterocyclic **carbenes** (NHC) as ligands in metal-mediated transformations has attracted significant interest in the last few years. The use of such complexes in olefin metathesis and palladium mediated cross coupling reactions will be presented. Recent

developments dealing with the synthesis of novel metal complexes, their role as catalyst precursors and the use of NHC themselves as catalysts in org. transformations will be discussed.

L3 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2002 ACS
AN 2002:485669 CAPLUS
TI Palladium/nucleophilic carbene catalysts for cross-coupling reactions
AU Hillier, Anna C.; **Nolan, Steven P.**
CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA
SO Platinum Metals Review (2002), 46(2), 50-64
CODEN: PTMRA3; ISSN: 0032-1400
PB Johnson Matthey Public Ltd. Co.
DT Journal
LA English
AB Palladium complexes bearing N-heterocyclic nucleophilic **carbenes** can function as efficient and convenient mediators of C-C and C-N cross-coupling reactions. These phosphine-free systems are highly effective in coupling reactions of aryl bromides and aryl chlorides with a variety of coupling partners. Some applications of these palladium complexes in a range of coupling reactions are described here and catalysts, conditions and results are presented.
RE.CNT 159 THERE ARE 159 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2002 ACS
AN 2002:438294 CAPLUS
DN 137:369554
TI Catalytic cross-coupling reactions mediated by palladium/nucleophilic carbene systems
AU Hillier, Anna C.; Grasa, Gabriela A.; Viciu, Mihai S.; Lee, Hon Man; Yang, Chuluo; **Nolan, Steven P.**
CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148-2820, USA
SO Journal of Organometallic Chemistry (2002), 653(1-2), 69-82
CODEN: JORCAI; ISSN: 0022-328X
PB Elsevier Science B.V.
DT Journal; General Review
LA English
AB A review on palladium-catalyzed cross-coupling reactions, with emphasis on N-heterocyclic **carbenes** as ancillary ligands. The palladium-mediated coupling reactions investigated include the Suzuki-Miyaura, Kumada-Tamao-Corriu, Heck, Sonogashira, Stille, Hiyama and aryl amination reactions.
RE.CNT 166 THERE ARE 166 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2002 ACS
AN 2002:426884 CAPLUS
DN 137:154714
TI Suzuki-Miyaura Cross-Coupling Reactions Mediated by Palladium/Imidazolium Salt Systems
AU Grasa, Gabriela A.; Viciu, Mihai S.; Huang, Jinkun; Zhang, Chunming; Trudell, Mark L.; **Nolan, Steven P.**
CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA
SO Organometallics (2002), 21(14), 2866-2873
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 137:154714
AB Nucleophilic N-heterocyclic **carbenes** (NHC) were used as ancillary ligands in Pd-mediated Suzuki-Miyaura cross-coupling reactions

involving aryl chlorides or aryl triflates with arylboronic acids. The scope of the coupling process using Pd(0) or Pd(II) sources and an imidazolium salt in the presence of a base, Cs₂CO₃, was tested using various substrates. The Pd(OAc)₂ or Pd₂(dba)₃/IMes.HCl (2 = 1,3-bis(2,4,6-trimethylphenyl)imidazolium chloride, where IMes = 1,3-bis(2,4,6-trimethylphenyl)imidazol-2-ylidene) system presents very high activity with respect to electron-neutral and electron-rich aryl chlorides. E.g., the Pd(OAc)₂/IMes.HCl catalyzed reaction of PhB(OH)₂ with p-MeC₆H₄Cl in presence of Cs₂CO₃ as base at 80.degree. (2.5 h) in dioxane gave p-MeC₆H₄Ph in 99% yield. The ligand IPr.HCl (3 = 1,3-bis(2,6-diisopropylphenyl)imidazolium chloride, where IPr = 1,3-bis(2,6-diisopropylphenyl)imidazol-2-ylidene) is also effective for the Suzuki-Miyaura cross-coupling involving a wide spectrum of aryl chlorides and aryl triflates. The general protocol developed was applied successfully to the synthesis of an antiinflammatory drug (Fenbufen) and to a key intermediate in the synthesis of sartans. Mechanistically, Pd-to-ligand ratio studies support an active Pd species bearing a nucleophilic carbene ligand.

RE.CNT 99 THERE ARE 99 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2002 ACS

AN 2001:783983 CAPLUS

DN 136:216478

TI Convenient and efficient cross-coupling of aryl halides mediated by palladium/bulky nucleophilic **carbenes** and related ligands

AU Jafarpour, Laleh; Grasa, Gabriella A.; Viciu, Mihai S.; Hillier, Anna C.; Nolan, Steven P.

CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA

SO Chimica Oggi (2001), 19(7/8), 10-16

CODEN: CHOGDS; ISSN: 0392-839X

PB TeknoScienze

DT Journal; General Review

LA English

AB A review with 32 refs. Simple protocols are described for palladium-mediated C-C and C-N bond forming reactions. N-heterocyclic nucleophilic carbene ligands assist these transformations very effectively and allow for the use of the inexpensive aryl chlorides as coupling partners. These non-phosphine palladium systems also permit simple workup procedures.

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2002 ACS

AN 2001:772916 CAPLUS

DN 136:69622

TI Amination Reactions of Aryl Halides with Nitrogen-Containing Reagents Mediated by Palladium/Imidazolium Salt Systems

AU Grasa, Gabriela A.; Viciu, Mihai S.; Huang, Jinkun; Nolan, Steven P.

CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA

SO Journal of Organic Chemistry (2001), 66(23), 7729-7737

CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society

DT Journal

LA English

OS CASREACT 136:69622

AB Nucleophilic N-heterocyclic **carbenes** have been conveniently used as catalyst modifiers in amination reactions involving aryl chlorides, aryl bromides, and aryl iodides with various nitrogen-contg. substrates. The scope of a coupling process using a Pd(0) or Pd(II) source and an imidazolium salt in the presence of a base, KOCMe₃ or NaOH, was tested

using various substrates. The Pd2(dba)3/IPr.cntdot.HCl [IPr = 1,3-bis(2,6-diisopropylphenyl)imidazol-2-ylidene] system presents the highest activity with respect to electron-neutral and electron-rich aryl chlorides. The ligand is also effective for the synthesis of benzophenone imines, which can be easily converted to the corresponding primary amines by acid hydrolysis. Less reactive indoles were converted to N-aryl-substituted indoles using as supporting ligand the more donating SIPr.cntdot.HCl [SIPr = 1,3-bis(2,6-diisopropylphenyl)-4,5-dihydroimidazol-2-ylidene]. The Pd(OAc)2/SIPr.cntdot.HCl/NaOH system is efficient for the N-arylation of diverse indoles with aryl bromides. The general protocol developed has been applied successfully to the synthesis of a key intermediate in the synthesis of an important new antibiotic. Mechanistically, palladium-to-ligand ratio studies strongly support an active species bearing one nucleophilic carbene ligand.

RE.CNT 114 THERE ARE 114 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2002 ACS

AN 2001:676668 CAPLUS

DN 135:228509

TI Reaction system comprising transition metal and imidazoline-2-ylidene or imidazolidine-2-ylidene and its use in coupling reactions

IN **Nolan, Steven P.**; Huang, Jinkun; Trudell, Mark L.; Zhang, Chunming; Lee, Hon Man

PA University of New Orleans Research and Technology Foundation, USA

SO PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001066248	A2	20010913	WO 2001-US5549	20010222
	WO 2001066248	A3	20020214		
	W: CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	US 6316380	B1	20011113	US 2000-507958	20000222
	US 6362357	B1	20020326	US 2000-511654	20000222
	US 6369265	B1	20020409	US 2000-511122	20000222
	US 6403801	B1	20020611	US 2000-507959	20000222
	US 6403802	B1	20020611	US 2000-511420	20000222
PRAI	US 2000-507958	A2	20000222		
	US 2000-507959	A2	20000222		
	US 2000-511122	A2	20000222		
	US 2000-511420	A2	20000222		
	US 2000-511654	A2	20000222		
	US 2000-553542	A2	20000420		
	US 1998-99722P	P	19980910		
	US 1999-121056P	P	19990222		
	US 1999-154260P	P	19990916		

OS MARPAT 135:228509

AB This invention provides a process for conducting reactions to form carbon-to-carbon or carbon-to-nitrogen bonds. The processes of the present invention make use of N-heterocyclic **carbenes** as ancillary ligands in various types of couplings of aryl halides and/or aryl pseudohalides. A Suzuki coupling, for example, can be carried out by mixing, in a liq. medium, at least one strong base; at least one aryl halide or aryl pseudohalide in which all substituents are other than boronic acid groups, wherein the aryl halide has, directly bonded to the arom. ring(s), at least one halogen atom selected from the group consisting of a chlorine atom, a bromine atom, and an iodine atom; at least one arylboronic acid in which all substituents are other than chlorine atoms, bromine atoms, iodine atoms, or pseudohalide groups; at

least one metal compd. comprising at least one metal atom selected from nickel, palladium, and platinum, wherein the formal oxidn. state of the metal is zero or two; and at least one N-heterocyclic carbene. One preferred type of N-heterocyclic carbene is an imidazoline-2-ylidene.

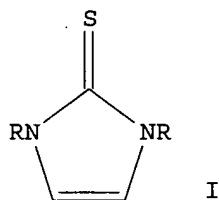
L3 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2002 ACS
AN 2001:390686 CAPLUS
DN 135:137612
TI Structural and Thermochemical Studies of Chiral Nucleophilic
Carbenes in the Cp*RuCl(L) (Cp = .eta.5-C5Me5; L = Chiral
Nucleophilic Carbene) System
AU Huang, Jinkun; Jafarpour, Laleh; Hillier, Anna C.; Stevens, Edwin D.;
Nolan, Steven P.
CS Department of Chemistry, University of New Orleans, New Orleans, LA,
70148, USA
SO Organometallics (2001), 20(13), 2878-2882
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 135:137612
AB The reaction of [Cp*RuCl]4 (1) with chiral nucleophilic carbene ligands L
= 1,3-R2-imidazol-2-ylidene (R = (R)-1-cyclohexylethyl ((-)ICMe),
(1S,2S,3S,5R)-isopinocampheyl ((+)IiPCamp), (R)-.alpha.-methylbenzyl
((+)IBMe)) affords the unsatd. chiral Cp*Ru(L)Cl (Cp* = .eta.5-C5Me5)
complexes 2-4 in high yields. A soln. calorimetric investigation in this
series clarifies the electron donor properties of these chiral ligands,
and comparisons are made with other recently reported nucleophilic carbene
complexes and with the widely used PCy3. Structural information from
single-crystal x-ray studies for complexes 2, 3, Cp*Ru(IMes)Cl (IMes =
1,3-bis(2,4,6-trimethylphenyl)imidazol-2-ylidene), Cp*Ru(ICy)Cl (ICy =
1,3-dicyclohexylimidazol-2-ylidene), and Cp*Ru(IAd)Cl (IAd =
1,3-diadamantylimidazol-2-ylidene) allows for an initial quant. treatment
of steric parameters assocd. with these ligands.
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2002 ACS
AN 2000:868246 CAPLUS
DN 134:207840
TI Transition-metal systems bearing a nucleophilic carbene ancillary ligand:
From thermochemistry to catalysis
AU Jafarpour, Laleh; **Nolan, Steven P.**
CS Department of Chemistry, University of New Orleans, New Orleans, CA,
70148, USA
SO Advances in Organometallic Chemistry (2000), 46, 181-222
CODEN: AOMCAU; ISSN: 0065-3055
PB Academic Press
DT Journal; General Review
LA English
AB A review contg. 128 refs. is presented. (c) 2000 Academic Press.
RE.CNT 128 THERE ARE 128 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2002 ACS
AN 2000:99249 CAPLUS
DN 132:237154
TI Structural and Solution Calorimetric Studies of Sulfur Binding to
Nucleophilic **Carbenes**
AU Huang, Jinkun; Schanz, Hans-Joerg; Stevens, E. D.; **Nolan, Steven**
P.; Capps, Kenneth B.; Bauer, Andreas; Hoff, Carl D.
CS Department of Chemistry, University of New Orleans, New Orleans, LA,
70148, USA
SO Inorganic Chemistry (2000), 39(5), 1042-1045

CODEN: INOCAJ; ISSN: 0020-1669

PB American Chemical Society
DT Journal
LA English
GI



AB Reaction of $\text{Ph}_3\text{M}(\text{S})$ ($\text{M} = \text{As}, \text{Sb}$) with adamantyl- and mesityl-substituted imidazole-based cyclic **carbenes** gave quant. the corresponding thiocarbonyl compds., shown as I ($\text{R} = 1\text{-adamantyl}, \text{mesityl}$). The structures of both I were detd. by x-ray crystallog. The enthalpies of formation of $\text{R}_2\text{C}(\text{S})$ were measured by soln. calorimetry and used to derive carbon to sulfur double-bond strength ests. of 102 kcal/mol for I ($\text{R} = \text{mesityl}$) and 91 kcal/mol for I ($\text{R} = 1\text{-adamantyl}$). The carbene ligands are thus thermochem. comparable to phosphine ligands with respect to enthalpy of oxidative addn. of sulfur.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2002 ACS

AN 1999:541671 CAPLUS

TI Ruthenium complexes with bulky nucleophilic **carbenes** and their role in ring-closing metathesis of olefins.

AU Jafarpour, Laleh; Nolan, Steven P.

CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA

SO Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), INOR-220 Publisher: American Chemical Society, Washington, D. C. CODEN: 67ZJAS

DT Conference; Meeting Abstract

LA English

AB As part of our ongoing study of phosphine ligand mimics, the organometallic chem. of a no. of sterically demanding nucleophilic carbene ligands has been investigated with group 8 metal centers. Complexes isolated with 1,3-bis(2,4,6-trimethylphenyl)imidazol-2-ylidene and 1,3-bis(2,6-diisopropylphenyl)imidazol-2-ylidene have been used in ring closing metathesis of olefins. In all cases, these novel complexes show equal or improved catalytic activities compared to the related phosphine contg. complexes.

L3 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2002 ACS

AN 1999:541670 CAPLUS

TI Nucleophilic **carbenes**: Stereoelectronic properties and catalytic application in olefin metathesis and C-C bond coupling reactions.

AU Huang, Jinkun; Nolan, Steven P.

CS Department of Chemistry, University of New Orleans, New Orleans, LA, 70148, USA

SO Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), INOR-219 Publisher: American Chemical Society, Washington, D. C. CODEN: 67ZJAS

DT Conference; Meeting Abstract

LA English

AB In an effort to clarify the relative importance of steric and electronic effects of nucleophilic **carbenes** (1, 3-disubstituted

imidazol-yl-2-ylidene) vs phosphines, we have investigated, using soln. calorimetry, the ruthenium system $\text{Cp}^*\text{Ru}(\text{L})\text{Cl}$ (L = carbene or phosphine). Quant. assessment of enthalpy data and structural studies of these complexes enable the detn. of their stereoelectronic properties. Catalytic application of this ligand class as auxiliary ligand in olefin metathesis and C-C bond coupling reactions will be presented.

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